BRUHATH BANGALORE MAHANAGARA PALIKE

Storm Water Drains, Dasarahalli Zone.

NAME OF WORK : CONSTRUCTION OF SWD U SHAPE DRAIN AT ABBIGERE POLICE STATION ROAD TO JUICE FACTORY IN WARD NO.12

Measurement Sheet- 1st & Final Bill

Measurement recorded on :- 20-09-2021

Sch.-B Item. No.11	Design mix M25 with OPC cement @340 kgs, with 20mm and down size graded granite metal coarse aggregates @0.70cum and fine aggregates @0.47cum, with superplastisiser @3lts confirming to IS9103-1999 Reaffirmed-2008 upto the hieght of 5.00 mtrs(For Sub Structure) . As direction of Engineer-in-charge

Abbigere near Gangammagudi Police station

Chainage From	Chainage TO	Side	Unit	No	Length	Width	Depth	Qty	Remarks
0.00	30.00	LHS	Cum	1	30.00	(0.347+0.337)/2	0.20	2.06	for R.W 3rd Lift
30.00	60.00	LHS	Cum	1	30.00	(0.347+0.337)/2	0.20	2.06	for R.W 3rd Lift
60.00	62.20	LHS	Cum	1	2.20	(0.347+0.337)/2	0.20	0.16	for R.W 3rd Lift
62.20	84.50	LHS	Cum	1	22.30	(0.289+0.276)/2	0.20	1.26	for R.W 3rd Lift
			Cum					5.54	

EIRL-1	Providing and laying Design mix M25 with OPC @ 340kgs, with 20mm and down size graded granite metal coarse aggregates @0.7cum and fine aggregates @ 0.47cum, with superplastisiser @3lts confirming to IS9103-1999 Reaffirmed-2008 including cost of materials, labour, HOM curing, from works, scaffolding and centring complete as per specifications (SR 18-19 Item no Item no 28.7.18 & Page No-228) - i) Upto 5.00 to 10.00 m height (For Substrucrure)

Abbigere near Gangammagudi Police station

Chainage From	Chainage TO	Side	Unit	No	Length	Width	Depth	Qty	Remarks
0.00	30.00	LHS	Cum	1	30.00	(0.337+0.25)/2	1.65	14.53	for R.W 3rd Lift
30.00	60.00	LHS	Cum	1	30.00	(0.337+0.25)/2	1.65	14.53	for R.W 3rd Lift
60.00	62.20	LHS	Cum	1	2.20	(0.337+0.25)/2	1.65	1.07	for R.W 3rd Lift
62.20	84.50	LHS	Cum	1	22.30	(0.276+0.25)/2	0.40	2.35	for R.W 3rd Lift
			Cum					32.48	

Sch.-B Item. No.12	Providing weep holes in Brick masonry / Plain / Reinforced concrete abutment, wing wall / return wall with 100 mm dia AC pipe, extending through the full width of the structure with slope of 1V :20H towards drawing force. Complete as per drawing and Technical Specifications including cost of materials, labour, HOM complete as per specifications. MORTH Specification No.2706 & 2200 as per engineer In Charge.

Abbigere near Gangammagudi Police station

Chainage From	Chainage TO	Side	Unit	No	Length	Width	Depth	Qty	Remarks
0.00	30.00	LHS	Mtr	1 x 2	13.00	0.450		11.70	
30.00	60.00	LHS	Mtr	1 x 2	13.00	0.450		11.70	
60.00	62.20	LHS	Mtr	1 x 2	1.88	0.450		1.69	
62.20	84.50	LHS.	Mtr	1 x 2	9.92	0.450		8.93	
			Mtr	-				34	

Contractor

Project Management Consultant

Asst. Engineer
SWD Dasarahalli Zone

Asst. Executive Engineer
SWD Dasarahalli Zone

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BRUHATH BANGALORE MAHANAGARA PALIKE

Storm Water Drains, Dasarahalli Zone.

NAME OF WORK : CONSTRUCTION OF SWD U SHAPE DRAIN AT ABBIGERE POLICE STATION ROAD TO JUICE FACTORY IN WARD NO.12

Measurement Sheet- 1st & Final Bill

Measurement recorded on :- 22-09-2021

Sch.-B Item. No. 15	Providing and laying of Filter media with granular materials /stone crushed aggregates satisfying the requirements laid down in clause 2504.2.2. of MORTH specifications to a thickness of not less than 600 mm with smaller size towards the soil and bigger size towards the wall and provided over the entire surface behind abutment, wing wall and return wall to the full height compacted to a firm condition complete as per drawing and Technical Specification including cost of materials, labour, HOM complete as per specifications. MORTH Specification No. 2504.2.2. As direction of Engineer-in-charge .

Abbigere near Gangammagudi Police station

Chainage	Side	Unit	No	Length	Width	Depth	Qty	Remarks
		Cum	1	84.50	0.60	0.60	30.42	
							30.42	

Sch.-B Item. No. 14	KSRRB M2600-3. (ii) Providing & fixing 250 mm wide, 20 mm thick compressible fibre board in expansion joint complete as per drawing & Technical Specification including cost of materials, labour, HOM complete as per specifications. MORTH Specification No. 2605

Abbigere near Gangammagudi Police station

Chainage	Side	Unit	No	Length	Width	Depth	Qty	Remarks
		Mtr	3	9.70			29.10	
							29.10	

Sch.-B Item. No. 13	Loading and Unloading of Stone Boulder / Stone aggregates /Sand/ Kanker / Moorum. KSRRB M100-1 : Placing tipper at loading point, loading with front end loader,dumping, turning for return trip, excluding time for haulage and return trip complete as per specifications.MORTH -100/ Chapter 1. As direction of Engineer-in-charge .

Abbigere near Gangammagudi Police station

Chainage	Side	Unit	No	Length	Width	Depth	Qty	Remarks
		Cum	Qty Same as item No. 5 = 1118.49 P-11				1118.49	
			Qty Same as item No. 6 = 264.35*60%				408.31	
					680.51 x 60%		1526.80	

Contractor	Project Management Consultant	Asst. Engineer SWD Dasarahalli Zone	Asst. Executive Engineer SWD Dasarahalli Zone

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BRUHATH BANGALORE MAHANAGARA PALIKE

Storm Water Drains, Dasarahalli Zone.

NAME OF WORK : CONSTRUCTION OF SWD U SHAPE DRAIN AT ABBIGERE POLICE STATION ROAD TO JUICE FACTORY IN WARD NO.12

Measurement Sheet- 1st & Final Bill

Measurement recorded on :- 23-09-2021

Sch.-B Item. No.4 — **Diversion of Water course by providing coffer dams** or bunds or islands as may be necessary for pipes and abutments, foundations, bailing out or pumping water during exavation and until completion etc., complete beyond 1.5m depth upto and including 3m depth

Abbigere near Gangammagudi Police station

Chainage		Side	Unit	No	Length	Width	Depth	Qty	Remarks
From	TO								
84.50	114.50	LHS	Cum	1	30.00	2.50	1.50	112.50	for R.W
114.50	144.50	LHS	Cum	1	30.00	2.50	1.50	112.50	for R.W
144.50	168.50	LHS	Cum	1	24.00	2.50	1.50	90.00	for R.W
			Cum					**315.00**	

Sch.-B Item. No.5 — Earth work in Excavation in **Marshy soil** for foundation of structures as per drawing and technical specifications, including setting out, construction of shoring and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom and backfilling with approved material complete as per MORTH specification No.304 V. **upto 3m depth By mechanical means**

Abbigere near Gangammagudi Police station

Chainage		Side	Unit	No	Length	Width	Depth	Qty	Remarks
From	TO								
84.50	114.50	LHS	Cum	1	30.00	8.20	1.55	381.30	for R.W
114.50	144.50	LHS	Cum	1	30.00	8.00	1.45	348.00	for R.W
144.50	168.50	LHS	Cum	1	24.00	7.90	1.5	284.40	for R.W
			Cum					**1013.70**	

13.N.

Contractor

Project Management Consultant

Asst. Engineer
SWD Dasarahalli Zone

MCHC
AEE 23/9/21

Asst. Executive Engineer
SWD Dasarahalli Zone

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BRUHATH BANGALORE MAHANAGARA PALIKE

Storm Water Drains, Dasarahalli Zone.

NAME OF WORK : CONSTRUCTION OF SWD U SHAPE DRAIN AT ABBIGERE POLICE STATION ROAD TO JUICE FACTORY IN WARD NO.12

Measurement Sheet- 1st & Final Bill

Measurement recorded on :- 25-09-2021

Sch.-B Item. No.6	**Earth work in Excavation for foundation of structures** as per drawing and technical specifications, including setting out, construction of shoring and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom and backfilling with approved material complete as per MORTH specification No.304 B. **in Ordinary soil upto 3m depth(By mechanical means)**

Abbigere near Gangammagudi Police station

Chainage From	Chainage TO	Side	Unit	No	Length	Width	Depth	Qty	Remarks
84.50	114.50	LHS	Cum	1	30.00	(4.7+6.5)/2	2.90	487.20	for R.W
			Cum	-1	30.00	5.60	1.55	-260.40	for R.W
114.50	144.50	LHS	Cum	1	30.00	(4.7+6.5)/2	3.00	504.00	for R.W
			Cum	-1	30.00	5.60	1.45	-243.60	for R.W
144.50	168.50	LHS	Cum	1	24.00	(4.7+6.5)/2	2.95	396.48	for R.W
			Cum	-1	24.00	5.60	1.50	-201.60	for R.W
			Cum					**682.08**	

Sch.-B Item. No.7	Providing and filling in foundation with granite/trap broken metal of 100 MM and down size, with approved sand including hand packing, ramming, watering, including cost of all materials and labour charges and with all lead and lift etc complete as per specification and the direction of the Engineer in charge

Abbigere near Gangammagudi Police station

Chainage From	Chainage TO	Side	Unit	No	Length	Width	Depth	Qty	Remarks
84.50	114.50	LHS	Cum	1	30.00	4.70	0.30	42.30	for R.W
114.50	144.50	LHS	Cum	1	30.00	4.70	0.30	42.30	for R.W
144.50	168.50	LHS	Cum	1	24.00	4.70	0.30	33.84	for R.W
			Cum					**118.44**	

B.N.
Contractor

Project Management Consultant

Asst. Engineer
SWD Dasarahalli Zone

Asst. Executive Engineer
SWD Dasarahalli Zone

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BRUHATH BANGALORE MAHANAGARA PALIKE

Storm Water Drains, Dasarahalli Zone.

NAME OF WORK : CONSTRUCTION OF SWD U SHAPE DRAIN AT ABBIGERE POLICE STATION ROAD TO RICE FACTORY IN WARD NO.12

Measurement Sheet- 1st & Final Bill

Measurement recorded on :-27-09-2021

Sch.-B Item. No.09	Plain Cement Concrete 1:2:4 with OPC cement @ 240 kgs, with 40mm and down size graded granite metal coarse aggregates @0.84 cum and fine aggregates @ 0.56cum, in open foundation including cost of all materials, labour, HOM curing, from works, scaffolding and centring complete as per Specification complete in Drawing and Technical Specifications. MORTH Specification No.1500, 1700 & 2100

Abbigere near Gangammagudi Police station

Chainage		Side	Unit	No	Length	Width	Depth	Qty
From	TO							
84.50	114.50	LHS	Cum	1	30.00	4.40	0.15	19.80
114.50	144.50	LHS	Cum	1	30.00	4.40	0.15	19.80
144.50	168.50	LHS	Cum	1	24.00	4.40	0.15	15.84
			Cum					55.44

B.N.

Contractor

Project Management Consultant

Asst. Engineer
SWD Dasarahalli Zone

Asst. Executive Engineer
SWD Dasarahalli Zone

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BRUHATH BANGALORE MAHANAGARA PALIKE

Storm Water Drains, Dasarahalli Zone.

NAME OF WORK : CONSTRUCTION OF SWD U SHAPE DRAIN AT ABBIGERE POLICE STATION ROAD TO JUICE FACTORY IN WARD NO.12

Measurement Sheet- 1st & Final Bill

Measurement recorded on :-28-09-2021

Sch.-B Item. No.19	Providing T.M.T. steel reinforcement for R.C.C. work including straightening, cutting, bending, hooking, placing in position, lapping and/or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per disign (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM complete as per specification. MORTH Specification No.1600 & 2200 TMT Bars Fe 500 (For Raft & Sub Structure).									
Chainage	**LHS**	**Retaining Wall**								
From	**To**	**Abbigere near Gangammagudi Police station**								
84.50	**114.50**									
Description	**Shape of Bar/ Bar No.**	**Dia of Bars (mm)**	**Spacing (M)**	**No.**	**No of Bars**	**Cut Length in (M)**	**10**	**12**	**16**	**20**
30.00										
Raft Bottom Main Bar	1	20	0.100	1	301	4.40				1,324.40
Raft Top Bar	2	16	0.100	1	301	4.52			1,360.52	-
Distribution	3	10	0.150	2	28	30.00	1,680.00			
Wall Drain Side	4	12	0.125	1	241	7.40		1,783.40		
Wall Filling Side Main Bar	5	16	0.150	1	201	7.40			1,487.40	-
Wall Distribution Both Side	6	10	0.150	2	41	30.00	2,460.00			
Wall Filling Side Short Bar	7	20	0.150	1	201	4.85				974.85
Chairs		16		1	50	2.75			137.50	-
Spacer Bars		12		1	72	1.00		72.00		
						Total Length (Rmt)	4,140.00	1,855.40	2,985.42	2,299.25
						Unit weight of bar	**0.617**	**0.889**	**1.580**	**2.469**
						Qty in KG	2554.38	1649.45	4716.96	5676.85
						Total Qty in KG	14597.64			
						Grand Total Qty	**14.6**	**MT**		

14.59

Contractor

Project Management Consultant

Asst. Engineer
SWD Dasarahalli Zone

Asst. Executive Engineer
SWD Dasarahalli Zone

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BRUHATH BANGALORE MAHANAGARA PALIKE

Storm Water Drains, Dasarahalli Zone.

NAME OF WORK : CONSTRUCTION OF SWD U SHAPE DRAIN AT ABBIGERE POLICE STATION ROAD TO JUICE FACTORY IN WARD NO.12

Measurement Sheet- 1st & Final Bill

Measurement recorded on :-28-09-2021

Sch.-B Item. No.19	Providing T.M.T. steel reinforcement for R.C.C. work including straightening, cutting, bending, hooking, placing in position, lapping and/or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per disign (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM complete as per specification. MORTH Specification No.1600 & 2200 TMT Bars Fe 500 (For Raft & Sub Structure).									
Chainage	**LHS**	**Retaining Wall**								
From	**To**	**Abbigere near Gangammagudi Police station**								
114.50	**144.50**									
Description	**Shape of Bar/ Bar No.**	**Dia of Bars (mm)**	**Spacing (M)**	**No.**	**No of Bars**	**Cut Length in (M)**	**10**	**12**	**16**	**20**
30.00										
Raft Bottom Main Bar	1	20	0.100	1	301	4.40				1,324.40
Raft Top Bar	2	16	0.100	1	301	4.52			1,360.52	-
Distribution	3	10	0.150	2	28	30.00	1,680.00			
Wall Drain Side	4	12	0.125	1	241	7.40		1,783.40		
Wall Filling Side Main Bar	5	16	0.150	1	201	7.40			1,487.40	-
Wall Distribution Both Side	6	10	0.150	2	41	30.00	2,460.00			
Wall Filling Side Short Bar	7	20	0.150	1	201	4.85				974.85
Chairs		16		1	50	2.75			137.50	-
Spacer Bars		12		1	72	1.00		72.00		
						Total Length (Rmt)	4,140.00	1,855.40	2,985.42	2,299.25
						Unit weight of bar	**0.617**	**0.889**	**1.580**	**2.469**
						Qty in KG	2554.38	1649.45	4716.96	5676.85
						Total Qty in KG	14597.64			
						Grand Total Qty	**14.6**	**MT**		

14.59

B.N.

Contractor

Project Management Consultant

Asst. Engineer
SWD Dasarahalli Zone

Asst. Executive Engineer
SWD Dasarahalli Zone

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BRUHATH BANGALORE MAHANAGARA PALIKE

Storm Water Drains, Dasarahalli Zone.

NAME OF WORK : CONSTRUCTION OF SWD U SHAPE DRAIN AT ABBIGERE POLICE STATION ROAD TO JUICE FACTORY IN WARD NO.12

Measurement Sheet- 1st & Final Bill

Measurement recorded on :-29-09-2021

Sch.-B Item. No.19	Providing T.M.T. steel reinforcement for R.C.C. work including straightening, cutting, bending, hooking, placing in position, lapping and/or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per disign (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM complete as per specification. MORTH Specification No.1600 & 2200 TMT Bars Fe 500 (For Raft & Sub Structure).									
Chainage	**LHS**	**Retaining Wall**								
From	**To**	**Abbigere near Gangammagudi Police station**								
144.50	**168.50**									
Description	**Shape of Bar/ Bar No.**	**Dia of Bars (mm)**	**Spacing (M)**	**No.**	**No of Bars**	**Cut Length in (M)**	**10**	**12**	**16**	**20**
24.00										
Raft Bottom Main Bar	1	20	0.100	1	241	4.40				1,060.40
Raft Top Bar	2	16	0.100	1	241	4.52			1,089.32	-
Distribution	3	10	0.150	2	28	24.00	1,344.00			
Wall Drain Side	4	12	0.125	1	193	7.40		1,428.20		
Wall Filling Side Main Bar	5	16	0.150	1	161	7.40			1,191.40	-
Wall Distribution Both Side	6	10	0.150	2	41	24.00	1,968.00			
Wall Filling Side Short Bar	7	20	0.150	1	161	4.85				780.85
Chairs		16		1	40	2.75			110.00	-
Spacer Bars		12		1	58	1.00		58.00		
						Total Length (Rmt)	3,312.00	1,486.20	2,390.72	1,841.25
						Unit weight of bar	**0.617**	**0.889**	**1.580**	**2.469**
						Qty in KG	2043.50	1321.23	3777.34	4546.05
						Total Qty in KG	11688.12			
						Grand Total Qty	**11.69**	**MT**		

11.68

Recd 29/9/21

13.N.

Contractor

Project Management Consultant

Asst. Engineer
SWD Dasarahalli Zone

Asst. Executive Engineer
SWD Dasarahalli Zone

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BRUHATH BANGALORE MAHANAGARA PALIKE

Storm Water Drains, Dasarahalli Zone.

NAME OF WORK : CONSTRUCTION OF SWD U SHAPE DRAIN AT ABBIGERE POLICE STATION ROAD TO JUICE FACTORY IN WARD NO.12

Measurement Sheet- 1st & Final Bill

EE

Measurement recorded on :- 30-09-2021

Sch.-B Item. No.10	Providing and laying Plain / Reinforced Cement Concrete design mix **M25** with OPC cement @ 340kgs, with 20mm and down size graded granite metal coarse aggregates @0.70cum and fine aggregates @ 0.47cum, with superplastisiser @3lts confirming to IS9103-1999 Reaffirmed-2008,**Open Foundation** complete as per Drawing and Technical Specification including cost of all materials, labour, HOM curing, form works, scaffolding and centering complete as per Specifications. MORTH Specification No. 1500,1700 & 2100

Abbigere near Gangammagudi Police station

Chainage From	Chainage TO	Side	Unit	No	Length	Width	Depth	Qty	Remarks
84.50	114.50	LHS	Cum	1	30.00	4.20	0.400	50.40	for R.W
			Cum	0.5	30.00	2.20	0.200	6.60	
			Cum	0.5	30.00	1.40	0.200	4.20	
			Cum	1	30.00	0.60	0.200	3.60	
114.50	144.50	LHS	Cum	1	30.00	4.20	0.400	50.40	for R.W
			Cum	0.5	30.00	2.20	0.200	6.60	
			Cum	0.5	30.00	1.40	0.200	4.20	
			Cum	1	30.00	0.60	0.200	3.60	
144.50	168.50	LHS	Cum	1	24.00	4.20	0.400	40.32	for R.W
			Cum	0.5	24.00	2.20	0.200	5.28	
			Cum	0.5	24.00	1.40	0.200	3.36	
			Cum	1	24.00	0.60	0.200	2.88	
			Cum					181.44	

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30/9/21

B.N.

Contractor

Project Management Consultant

Asst. Engineer
SWD Dasarahalli Zone

Asst. Executive Engineer
SWD Dasarahalli Zone

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BRUHATH BANGALORE MAHANAGARA PALIKE

Storm Water Drains, Dasarahalli Zone.

NAME OF WORK : CONSTRUCTION OF SWD U SHAPE DRAIN AT ABBIGERE POLICE STATION ROAD TO JUICE FACTORY IN WARD NO.12

Measurement Sheet- 1st & Final Bill

Measurement recorded on :- 01-10-2021

Sch.-B Item. No.11	Design mix M25 with OPC cement @340 kgs, with 20mm and down size graded granite metal coarse aggregates @0.70cum and fine aggregates @0.47cum, with superplastisiser @3lts confirming to IS9103-1999 Reaffirmed-2008 upto the hieght of 5.00 mtrs(For Sub Structure) . As direction of Engineer-in-charge

Abbigere near Gangammagudi Police station

Chainage		Side	Unit	No	Length	Width	Depth	Qty	Remarks
From	TO								
						0.53			
84.50	114.50	LHS	Cum	1	30.00	(0.6+0.46)/2	2.40	38.16	for R.W 1st Lift
114.50	144.50	LHS	Cum	1	30.00	(0.6+0.46)/2	2.40	38.16	for R.W 1st Lift
144.50	168.50	LHS	Cum	1	24.00	(0.6+0.46)/2	2.40	30.53	for R.W 1st Lift
								106.85	

B.N-

Contractor

Project Management Consultant

Asst. Engineer
SWD Dasarahalli Zone

11/10/21

Asst. Executive Engineer
SWD Dasarahalli Zone

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